

**ABSTRACT OF THE DISCLOSURE****METHOD AND APPARATUS FOR AUTONOMICALLY MOVING CACHE  
ENTRIES TO DEDICATED STORAGE WHEN FALSE CACHE LINE  
SHARING IS DETECTED**

A method, apparatus, and computer instructions in a data processing system for processing instructions are provided. Instructions are received at a processor in the data processing system. If a selected indicator is associated with the instruction, counting of each event associated with the execution of the instruction is enabled. In some embodiments, when it is determined that a cache line is being falsely shared using the performance indicators and counters, an interrupt may be generated and sent to a performance monitoring application. An interrupt handler of the performance monitoring application will recognize this interrupt as indicating false sharing of a cache line. Rather than reloading the cache line in a normal fashion, the data or instructions being accessed may be written to a separate area of cache or memory area dedicated to false cache line sharing data. The code may then be modified by inserting a pointer to this new area of cache or memory. Thus, when the code again attempts to access this area of the cache, the access is redirected to the new cache or memory area rather than to the previous area of the cache that was subject to false sharing. In this way, reloads of the cache line may be avoided.